



Canadian Gas - Decline Sets in.

Posted by [Libelle](#) on October 19, 2007 - 9:03am in [The Oil Drum: Canada](#)

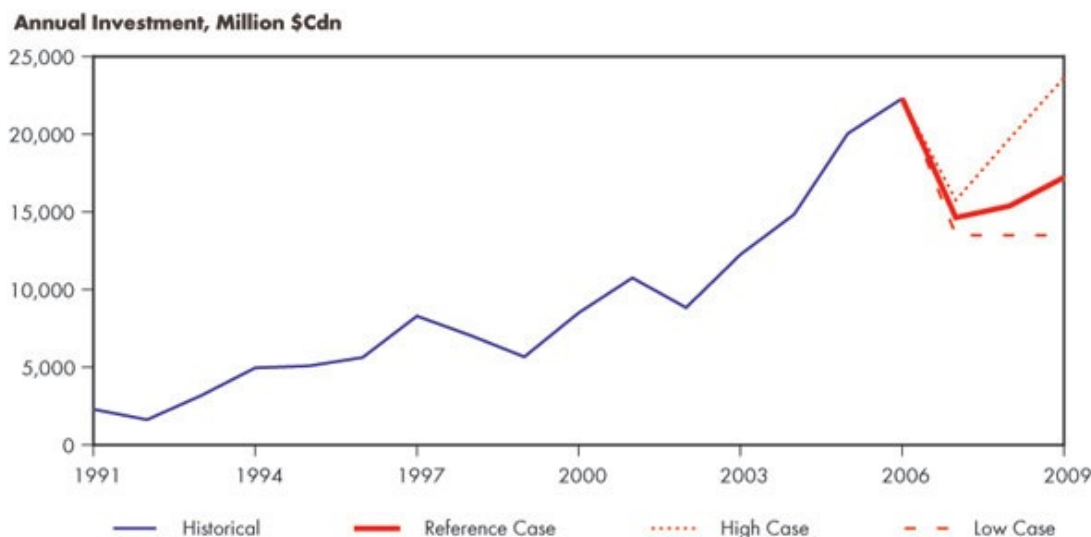
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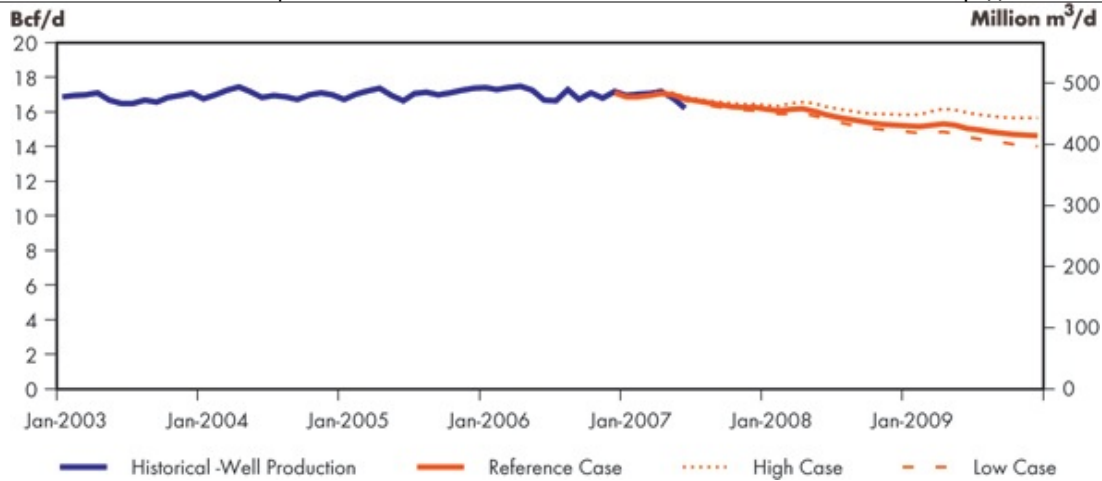
Canada provides a quarter of all the gas produced in Canada and the U.S.. Ninetyeight per cent of Canadian production comes from the Western Canada Sedimentary Basin (WCSB), and almost all the rest from Atlantic Canada.

Since the year 2000, total Canadian production has been maintained at about 480 million cubic metres per day. This has been achieved only by a very considerable increase in the number of wells drilled each year. For details, see [a posting I wrote in January](#). It is evident that such increases cannot be continued indefinitely. Under these circumstances, when drilling levels off, output begins to fall, and an actual decrease in drilling leads to even faster decline. When gas prices were in the region of \$15 per gigajoule in late 2005, there was considerable enthusiasm for drilling, but in the last year the price has wandered erratically in the range of \$5 to \$9 per gigajoule, and costs have been high. At \$7 per gigajoule, drilling has been falling, and [companies are laying workers off](#).

Canada's [National Energy Board](#) has just issued one of its updates on future gas production, [Short-term Canadian Natural Gas Deliverability 2007-2009](#). In it, the effects of the drilling decline are assessed, and three scenarios for the future are presented, focussing on the likely level of investment in WCSB drilling.

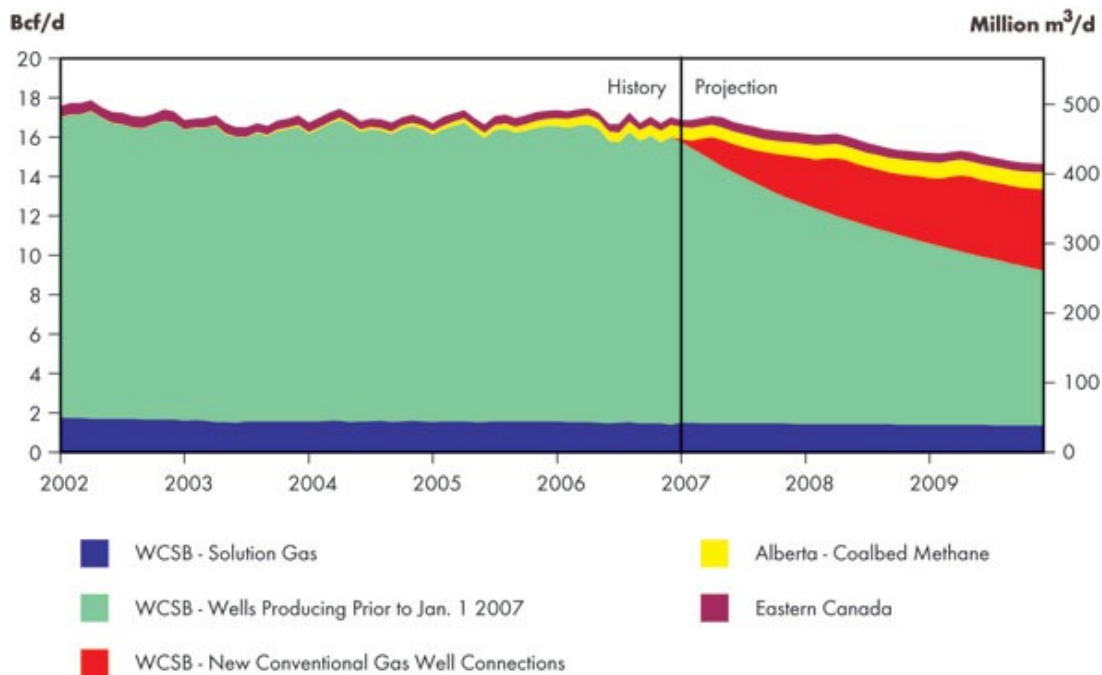


This figure shows very well the huge increase in effort required in 2000-2006 to keep production flat - the annual cost more than doubled over those six years. The substantial decline in expenditure that is now occurring (to levels still much higher than in 2000), must result in a significant fall in production. What is more, this makes it almost impossible ever again to raise production to where it was in 2000-2006. The three scenarios shown in the investment figure are reflected in corresponding predictions of future production for all of Canada.



All three scenarios show declines that are obvious even on this graph, which has its y axis origin at zero, and has only a three-year period of decline. Note that even the "high effort" case, involving a new record expenditure in 2009, shows a fall in production every year.

A breakdown of production is shown for the reference case:



The decline that is expected is very significant - about 5% per year. It can be seen that coal-bed methane production is expected to produce a very useful quantity of gas, but nowhere near enough to stem the decline. Contrast this with the two scenarios (called "Supply Push" and Techno-Vert") envisaged in a [2003 report](#), "Canada's Energy Future, Scenarios for Supply and Demand to 2025". Bear in mind that these scenarios were supposed to be achieved with gas prices remaining under \$4 per gigajoule for the entire period.

Figure 5.21 Deliverability by Project – Supply Push

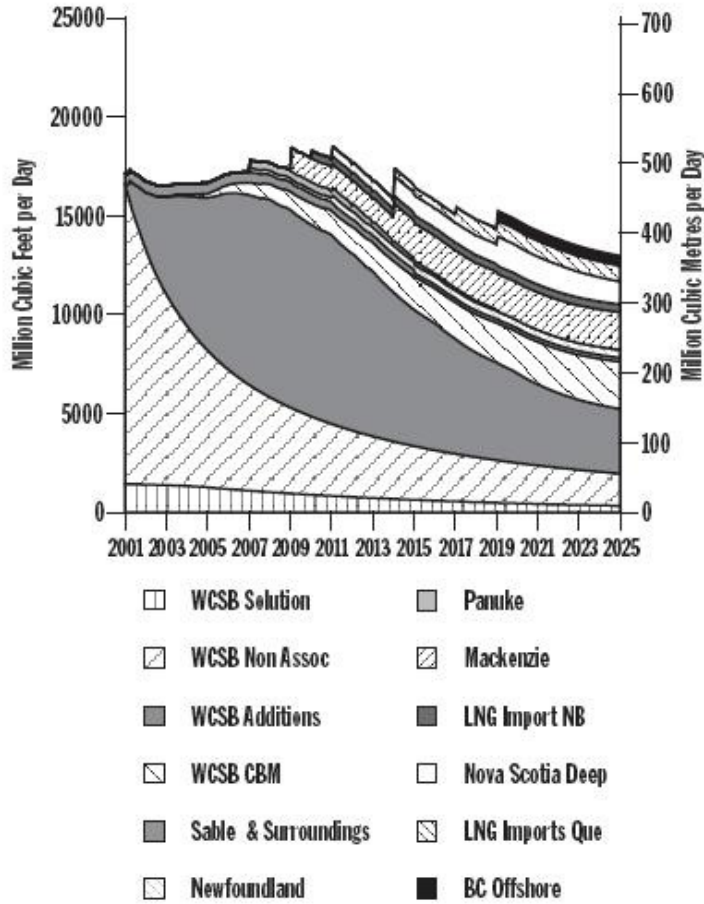
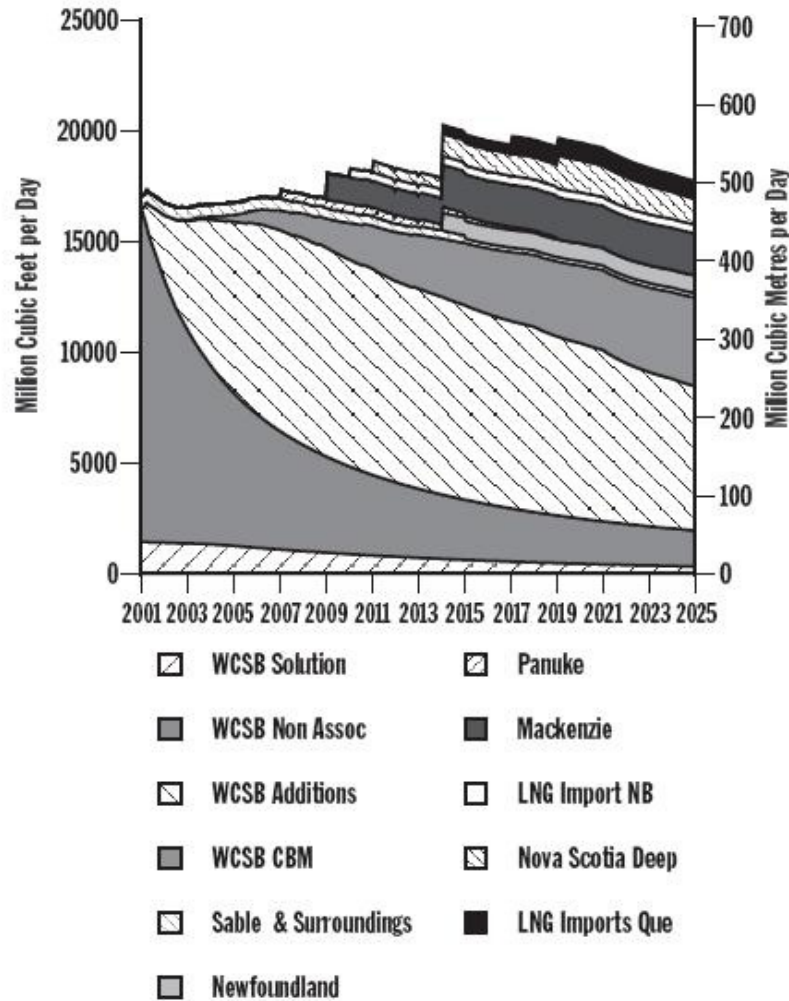


Figure 5.23 Deliverability by Project – Techno-Vert



A decline in WCSB conventional gas was anticipated, but coal bed methane and Arctic and offshore gas were expected to make up for the fall in production. In fact, the WCSB decline now seems likely to be faster than envisaged in either of these scenarios, and relief in the form of new supply is nowhere in sight.

Even with the gas price at \$7 per gigajoule, production costs are high enough to discourage drilling for new supplies. If this 5% per annum decline continues, output will be down to 60% of its current value in 10 years' time, and Canada will have little gas for export, even without a major increase in consumption for oil sand bitumen extraction and upgrading. Each new outlook results in a view of the future with lower gas production, and this consistent downward trend leads to still more disturbing conclusions.



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